

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
Prosecution Staff Proposed Draft
MONITORING AND REPORTING PROGRAM NO. R5-2008-XXXX

FOR

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The following Regional Water Quality Control Board, Central Valley Region (Water Board) Monitoring and Reporting Program (MRP) contains the minimum monitoring and reporting requirements necessary to determine compliance with Cleanup and Abatement Order (CAO) Order No. R5-2008-XXXX. This MRP is issued pursuant to Section 13267 of the California Water Code and is necessary to delineate groundwater pollutant plumes and determine whether remediation efforts are effective. Existing data and information about the site indicate petroleum hydrocarbons originating from the property have impacted groundwater and at least 13 residential water supply wells. Eleven (11) of the residential water supply wells have granulated activated carbon (GAC) treatment systems. The Dischargers shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. However, the Dischargers may reduce sampling frequencies of some groundwater monitoring wells upon written approval by Water Board staff.

Currently 20 groundwater monitoring wells, 2 piezometers, 6 groundwater extraction wells, 7 soil vapor extraction wells, 7 air sparging wells, 21 offsite residential water supply wells, an on-site water supply well and 11 offsite domestic water supply GAC treatment systems are monitored.

Each domestic well treatment system currently consists of a minimum of two GAC units inline (back to back) located between the well and the residence. Domestic well water is sampled at a minimum from three locations: Sample 1, pretreatment influent between the wellhead and first inline GAC unit; Sample 2, between the two inline GAC units; and Sample 3, post-treatment effluent, i.e. after the second GAC unit and before service to residence. Sample 1 and Sample 2 are analyzed for pollutants. If Sample 1 and Sample 2 are non-detect for pollutants, then the remaining Sample 3 (effluent water) is not analyzed. If pollutant breakthrough occurs between the two GAC units, then Sample 3 is analyzed, the first inline GAC unit is replaced by the second inline GAC unit, and a new GAC unit is installed in the second GAC unit location.

Prior to construction of any new groundwater monitoring, extraction wells, or new domestic well treatment systems, the Dischargers shall submit plans and specifications to the Water Board for review and approval. Once installed, all new wells and domestic treatment systems shall be added to the monitoring program and shall be sampled and analyzed according to the schedule below.

GROUNDWATER MONITORING

The groundwater monitoring program for these wells shall follow the sampling and analytical program presented in **Tables 1 and 2** (see attached). Any new wells or domestic well treatment systems added to this program will initially be sampled on a quarterly basis for the constituents listed in **Table 2 for a period of at least one year**. Sample collection and analysis shall follow standard EPA protocol. Annual groundwater monitoring shall occur during the 4th quarter of each year. Semi-annual groundwater monitoring shall occur during the 2nd and 4th quarters of each year. [Modifications to the sampling regime may be made by the Regional Board Underground Storage Tank Program Manager as applicable based upon historic and current sampling data and a formal request for said modification.](#)

REPORTING

When reporting data, the Dischargers shall submit the information chronologically in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner as to illustrate clearly the compliance with this Order.

In addition, the Dischargers shall notify the Water Board within 24 hours of any unscheduled shutdown of any remediation system lasting more than 48 hours.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all reports shall be prepared by the appropriate registered professional or their subordinate and signed by the registered professional.

The Dischargers must comply with Article 12 of the Underground Storage Tank Regulations (Sections 2729 and 2729.1 of California Code of Regulations), which requires Responsible Parties to submit analytical and site data electronically to Geotracker. Attached is our letter (Required Electronic Deliverable Format for Laboratory and Site Data Submittals to Regulating Agencies) explaining how to obtain information to implement this requirement.

Quarterly Reports, an Annual Report, and Individual Domestic Well Reports should be prepared as follows:

Quarterly Reports - Quarterly reports shall be submitted to the Water Board by the **30th day of the month following the end of each calendar quarter (i.e., 30 January, 30 April, 30 July, and 30 October)** until such time as the Executive Officer determines that the reports are no longer necessary. Each quarterly report shall include the following minimum information:

- (a) a description and discussion of the groundwater sampling event and results, including how and when samples were collected;

- (b) field logs that contain, at a minimum, water quality parameters measured before, during, and after purging, method of purging, depth of water, volume of water purged, etc.;
- (c) groundwater potentiometric surface maps for all groundwater zones (Water Table, Intermediate, Deep);
- (d) a table showing well construction details such as well number, groundwater zone being monitored, coordinates (northings and eastings), ground surface elevation, reference elevation, elevation of screen, elevation of bentonite, elevation of filter pack, and elevation of well bottom;
- (e) cumulative data tables containing the water quality analytical results, depth to groundwater, and groundwater elevations for each monitoring well;
- (f) a separate cumulative data table containing the water quality analytical results for all residential supply wells;
- (g) a copy of the laboratory analytical data report;
- (h) the status of any ongoing remediation, including cumulative information on the mass of pollutant removed from the subsurface, system operating time, the effectiveness of the remediation system, and any field notes pertaining to the operation, optimization, and maintenance of the system; and
- (i) if applicable, the reasons for and duration of all interruptions in the operation of any remediation system, and actions planned or taken to correct and prevent interruptions.

Annual Report - **One** quarterly report shall be submitted to the Regional Board as an annual report, due by **1 February** of each year. This report shall contain an evaluation of the effectiveness and progress of the investigation and remediation, and shall be substituted for the fourth quarter monitoring report. The annual report shall contain the information specified for quarterly reports (above) as well as the following information:

- (a) both tabular and graphical summaries of all data obtained during the previous year;
- (b) groundwater potentiometric surface maps for each quarter and each aquifer zone (Water Table, Intermediate, Deep);
- (c) pollutant concentration maps of each aquifer zone for the fourth quarter (the event where all wells in Table 1 are sampled);
- (d) a discussion of the long-term trends in the concentrations of the groundwater pollutants;
- (e) an analysis of whether the pollutant plume is being captured by the extraction

- systems (when applicable) or is continuing to migrate;
- (f) a description of all remedial activities conducted during the year, an analysis of their effectiveness in removing the pollutants, and plans to improve/modify remediation system operations;
 - (g) an identification of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
 - (h) if desired, a proposal with supporting rationale for any revisions to the groundwater sampling frequencies and/or list of analytes.

Individual Residential Supply Well Reports - The Dischargers shall submit individual reports per the Quarterly Reports schedule to each residential supply well owner and, where applicable, residential supply well user (tenant), consisting of the data and a cover letter explaining the results of the monitoring for that domestic well.

The results of any monitoring done more frequently than required at the locations specified in the MRP also shall be reported to the Water Board. The Dischargers shall implement the above monitoring program as of the date of this Order.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on ____ October 2008.

PAMELA C. CREEDON, Executive Officer

(Date)